ATTACHMENT 8: QUALITY ASSURANCE

The Quality Assurance and Quality Control (QA/QC) for this project is broken into two categories, Project Procedural/Management and Project Technical QA/AC, both essential for the project to succeed.

1. Project Procedural / Management QA/QC

To ensure the Project is completed on schedule and within budget, as well as keeping the DCTRA Board of Directors and Stakeholders involved, the management of the Project is set up with different layers of checks and balances, to keep the Project Team accountable. The appointed Project Director is ultimately accountable for the Project management and providing updates to the stakeholders and the DWR Grant Management team. The Project Director will be held accountable monthly by the Advisory Committee of the DCTRA Board. At the time the Project begins, the Advisory Committee will be provided a copy of the Project Budget and Schedule. At each meeting, the Project Director, with assistance from the consultant team, will provide a Project update, including a summary of what items have been completed, status of ongoing Tasks, and updates on how the future milestones will be accomplished to stay on schedule. The Advisory Committee will assume the responsibilities of overseeing the Project Director to make sure the implementation of the grant and milestones are being completed on schedule. The Advisory Committee will report and provide updates to the DCTRA Board on a bi-monthly basis at each Board meeting.

By having this constant flow of communication between the Consultant, Advisory Committee and the Project Director, the Project will consistently remain at the forefront of discussions between the Committee members and stakeholders. This process has been used when implementing Groundwater Management Plan Updates and the Groundwater Management Plan Annual Reports, which has been very successful in keeping projects on track and within budget and keeping the stakeholders involved.

Additionally, Progress Reports will be prepared by the DCTRA and submitted to the DWR throughout the duration of the Project, as different milestones identified in the Work Plan are met. This will keep the DWR staff updated with the Project status and keep them informed of progress.

2. Project Technical QA/QC

It is essential that the data collected and identified within the Basin for this Project be accurate and that standard methodologies are implemented. Following is a list of the technical QA/QC measures that will be implemented for this Project to ensure accurate and valid data is used in the summary report:

- **Groundwater Quality Data QA/QC:**
  The purpose of this project is to collect existing available data rather than collect new samples. The groundwater quality data that will be included within the report will identify the quality control measures taken when the sample was collected. Most of the available historical data regarding groundwater will be from both local agencies and regional government agencies, as the quality data was collected as part of a regulatory requirement. For the regulatory requirements, the standards and procedures for collecting the data are clearly outlined, along with chain of custody information and certified laboratory results. An example is the water quality data that may come from the Regional Water Quality Control Board from a Waste Discharge Permit will be required to

include copies of the laboratory results and sampling protocol. The historical data compiled in the report will only be used if proper standards and procedures can be verified.

- **Depth to Groundwater Data QA/QC:**
  The purpose of this project is to collect existing available data rather than collect new data. The current Groundwater Management Plan includes a monitoring plan which sounds existing wells within the Basin. The purpose of this Project is to locate historical groundwater depth data to better understand recent trends in groundwater depth and flow. The historical depth to groundwater data that is located will be reviewed to identify the following technical information:
    - Date of Sample Event
    - Well Casing Elevation (per a specific Datum)
    - Type of Well (Domestic, Monitoring, Irrigation, Municipal)
    - Well Drilling Log (if available)
    - Location of the Well

  If all the data listed above is not available, determination on whether the particular data from the well will be used in the Report will be determined by the licensed Civil Engineer with experience in hydrogeology.

- **Professional Qualifications:**
  The Project Team is made up of licensed professional individuals. The overall project manager will be David De Groot, RCE 70992, a licensed Civil Engineer in the State of California, with experience in hydrogeology and water resources. The surveying task to establish the Land Subsidence network will be completed by Randy Wasnick, PLS 8163, a licensed Land Surveyor in the State of California. The technical staff assembling the data and compiling the results will be under the direct supervision of these licensed professionals. The overall Project Director, Dan Vink, has over 15 years of experience managing projects within the DCTRA Basin, ranging from new canal projects to groundwater banking projects, to monitoring and management plans.

- **Calibration of Data:**
  One of the objectives of this Project is to establish the historical baseline conditions of the Basin so that future changes to the Basin can be better identified and prioritization of groundwater resource management can be established. The historical data will be calibrated and verified for accuracy by implementing the following checks and balance calculations as possible.
    - Compare existing land use maps (aerial imagery) to crop data, both of which are used to calculate Basin water demands. The cropping data and land use maps should have similar results regarding total acres of cropland, etc.
    - Compare surface water quantity data with local irrigation districts to data provided by the Army Corps of Engineers regarding released water from Success Dam and from the Bureau of Reclamation regarding Central Valley Project Water released. The irrigation districts and the government agency data should be similar.